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10. (Once Amended) The member of claim 8, wherein the rail and channel, when viewed in cross-section, flare outwardly at a common end thereof.

13. (Once Amended) A method of reinforcing a support member that is used to form a frame for an architectural structure, comprising:

providing an extruded hollow beam that includes a plurality of interconnected walls, at least one of the plurality of walls including a plurality of projecting lugs integrally connected to a central portion of an inside surface thereof;

providing a reinforcing insert defining a plurality of recesses adapted to mate in inter-fitting engagement with said plurality of lugs; and

connecting the insert to the beam by inter-fitting the lugs within the recesses, the insert being sized and positioned relative to the beam in accordance with engineering calculations which determine the expected distribution of forces along the beam.

REMARKS

The Examiner rejected claims 1-3 and 13-15 under 35 U.S.C. § 102(b) as being anticipated by Power, Jr. et al. (U.S. Patent No. 6,385,941). Claims 5-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Simme (U.S. Patent No. 4,944,545). Claims 8-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Smith et al. (U.S. Patent No. 3,382,639). Claim 4 was objected to as being dependent upon a rejected base claim. Claims 1-15 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 was generally identified on the Office Action Summary page as being rejected, but no formal grounds of rejection were set forth in the Detailed Action. Reconsideration of this application is respectfully requested in view of the amendments and/or remarks provided herein.

Rejection under 35 U.S.C. § 112

1. Claims 1-15 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, with respect to claims 1 and 8, the Examiner asserts that the phrase “can be” renders the claims indefinite. With respect to claim 10, the Examiner asserts that the phrase “dovetail-like” renders the claim indefinite. Applicants have herein amended claims 1, 8 and 10 to remove the problematic language. Applicants’ amendments are fully supported by the text and drawings contained in Applicants’ originally filed application; thus, no new matter has been entered. For example, the outwardly flared ends of the rail and the channel, when viewed in cross-section, are clearly depicted in Figs. 2a-2c of Applicants originally filed application. As a result, Applicants request that the Examiner withdraw his rejection of claims 1-15 under 35 U.S.C. § 112, second paragraph.

Rejections under 35 U.S.C. § 102(b)

2. Claims 1-3 and 13-15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Power, Jr. et al. (hereinafter “Power”). Applicants have herein amended independent claims 1 and 13 to more clearly distinguish said claims over the disclosure and suggestions of Power. In particular, Applicants have modified claim 1 to recite a plurality of projections connected to a central portion of one of the interior walls of the load bearing element, wherein the reinforcement slat slidably connects to the projections. Claim 13 has been modified to recite a plurality of projecting lugs integrally connected to a central portion of an inside surface of at least one of the beam walls, wherein the reinforcing insert includes recesses that mate or inter-fit with the projecting lugs. Applicants submit that Power does not disclose or suggest either such combination. Support for Applicants’ amendments to claims 1 and 13 can be found in Figs. 2a-2c, 3, 4, and 5 of Applicants’ originally filed specification; thus, no new matter has been added by these amendments.

Power discloses a simple lap beam in which an internal strap is used to reinforce a rectangular beam. The inside surfaces of the short beam walls each include a prong (132, 172). The strap (140) includes a recess that mates with the applicable prong when the strap is inter-fitted with the prong. However, as is clear from the drawings and description of Power, each

prong is located near the end of its respective beam wall. By contrast, the projections and projecting lugs recited in claims 1 and 13 are centrally located along the beam wall, thereby providing better reinforcing support than is provided by the straps disclosed in Power.

Therefore, for the foregoing reasons, Applicants submit that the recitations of claims 1 and 13 are not disclosed or suggested by Power and respectfully request that claims 1 and 13 may now be passed to allowance.

Claims 2 and 3 depend upon claim 1, which claim has been shown allowable above. Therefore, since claims 2 and 3 each introduce additional subject matter that, when considered in the context of the recitations of claim 1, constitutes patentable subject matter, Applicants respectfully submit that claims 2 and 3 are in proper condition for allowance.

3. Claims 5-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Simme. In particular, with respect to independent claim 5, the Examiner asserts that Simme discloses the use of a structural beam including an elongated load bearing element (4) having outer walls defining anchor members (5), wherein a reinforcing slat (8) has a female receptacle (9) for receiving the anchor member (5). Applicants have modified claim 5 slightly to more clearly recite the subject matter of such claim. In view of such clarifying amendments, Applicants submit that Simme does not anticipate claim 5.

As amended, claim 5 is generally directed to the embodiment depicted in Applicants' Fig. 9, in which the anchoring members or projections are defined by the outer surface of at least one of the beam walls. To the extent that Simme discloses anchoring members at all, such members (5, 10) are clearly on the inner surfaces of the beam walls. Further, Simme does not suggest that any anchoring members could or should be defined by the outer surface of any of the beam walls.

Therefore, for the foregoing reasons, Applicants submit that the recitations of claim 5 are not disclosed or suggested by Simme and respectfully request that claim 5 may now be passed to allowance.

Claims 6 and 7 depend upon claim 5, which claim has been shown allowable above. Therefore, since claims 6 and 7 each introduce additional subject matter that, when considered in the context of the recitations of claim 5, constitutes patentable subject matter, Applicants respectfully submit that claims 6 and 7 are in proper condition for allowance.

4. Claims 8-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Smith et al. (hereinafter “Smith”). With respect to independent claim 8, the Examiner asserts that Smith discloses the use of a support member that includes a beam (12) having at least one rail formed by walls 18 and 19, wherein an insert (21) is disposed in an inter-fitting relation within the rails to form an elongated channel member (B). Applicants respectfully disagree.

Applicants’ claim 8 recites a support member that includes an elongated beam, a reinforcing insert, an elongated rail integrally attached to an interior wall of the beam, and an elongated channel defined by the reinforcing insert adapted to engage in inter-fitting relation with the rail (emphasis added). As noted by the Examiner, Smith describes a support member that includes a beam with two integral rails (18, 19) and an insert (21). However, in Smith, the rails (18, 19) define a channel into which the insert (21) is fitted. Thus, Smith does not disclose an insert (21) that defines a channel adapted to engage in inter-fitting relation with the rail. Coincidentally, the insert in Smith does define a channel similar to the channel defined by the rails (18, 19). However, the channel defined by Smith’s insert (21) is not adapted to engage anything. Thus, Smith discloses a set of rails (18, 19) that define a channel adapted to engage in inter-fitting relation with the insert (21). By contrast, claim 5 recites an insert that defines a channel adapted to engage in inter-fitting relation with a rail. Thus, in claim 5, the insert defines the channel; whereas, in Smith, the rails define the channel.

Therefore, for the foregoing reasons, Applicants submit that the recitations of claim 8 are not disclosed or suggested by Smith and respectfully request that claim 8 may now be passed to allowance.

Claims 9-12 depend upon claim 8, which claim has been shown allowable above. Therefore, since claims 9-12 each introduce additional subject matter that, when considered in

the context of the recitations of claim 8, constitutes patentable subject matter, Applicants respectfully submit that claims 9-12 are in proper condition for allowance.

Allowed/Unrejected Claims

5. Applicants would like to thank the Examiner for indicating the allowability of claim 4 if such claim were rewritten in independent form. For the reasons set forth above, Applicants also believe that claims 1-3 and 5-15 are allowable over the prior art of record. Therefore, Applicants will not be incorporating the limitations of claim 4 into any of the independent claims at this point in time.

6. With respect to claim 16, the Examiner noted that such claim was rejected on the Summary page of the Office Action, but failed to provide any details regarding such rejection in the body of the Detailed Action. Applicants have evaluated the recitations of claim 16 in view of the cited references of record and believe that claim 16, as originally filed, is patentable in view of such references. If the Examiner disagrees, Applicants invite the Examiner to issue a non-final action explaining the basis for any refusal to allow claim 16. In view of the foregoing, Applicants respectfully request that the Examiner issue a notice of allowance allowing all 16 claims of the present application.

Amendments to the Specification

7. Applicants have herein amended the last paragraphs on pages 4 and 8 of the specification to correct minor grammatical informalities contained therein. Applicants submit that none of these amendments add any new matter into the specification.

Amendments to Certain Claims

8. Claims 1 and 8 have been amended to correct minor informalities contained therein. Applicants submit that none of these amendments add any new matter into the specification.

9. The Examiner is invited to contact the undersigned by telephone, facsimile or email if the Examiner believes that such a communication would advance the prosecution of the

instant application. Please charge any necessary fees associated herewith, including extension of time fees (if applicable and not paid by separate check), to the undersigned's Deposit Account No. 50-1111.

Respectfully submitted,

By: DCC
Daniel C. Crilly
Attorney for Applicant
Reg. No.: 38, 417
BRINKLEY, MCNERNEY,
MORGAN, SOLOMON & TATUM,
LLP
200 East Las Olas Blvd., Suite 1900
Ft. Lauderdale, FL 33301
Telephone: (954) 522-2200
Fax: (954) 522-9123
Email: dcc@brinkleymcnerney.com

VERSION OF AMENDED CLAIMS WITH MARKINGS
TO SHOW CHANGES MADE

1. (Once Amended) A structural-beam member for use in forming [which can be assembled to form] a frame for an architectural structure, comprising:[
an extruded elongated load bearing element having a plurality of inner walls [arranged to define a cavity];
an elongated reinforcement slat slidably connected to at least one of said plurality of inner walls; and
a plurality of [at least one] elongated projections [projection] fixedly connected to a central portion of said at least one of said plurality of inner walls, said slat connected to said at least one of said plurality of inner walls by said plurality of elongated projections [at least one projection].

5. (Once Amended) A structural member for making an architectural frame, said structural member comprising:

an elongated element having a plurality of [outer] walls, each of said plurality of walls including an inner surface and an outer surface;

the outer surface of at least one of said outer walls defining at least one anchoring member; and

a reinforcement slat adapted to be connected to said anchoring member; said slat defining at least one female receptor for receipt of said at least one anchoring member.

8. (Once Amended) A support member for use in forming [which can be assembled to form] a frame for an architectural structure comprising:

a generally rectangular, hollow, elongated beam;

a reinforcing insert having a [an elongate] length coincident with or less than a [the elongate] length of the beam;

at least one elongated connecting rail integrally attached to an interior wall of the beam;
and

an elongated channel defined by the reinforcing insert [member] adapted to engage in inter-fitting relation with said rail.

10. (Once Amended) The member of claim 8, wherein the rail and channel, when viewed [form a dovetail-like connection] in cross-section, flare outwardly at a common end thereof.

13. (Once Amended) A method of reinforcing a support member that is used [which can be assembled] to form a frame for an architectural structure, comprising:

providing an extruded hollow beam that includes a plurality of interconnected walls, at least one of the plurality of walls including a plurality of [which has at least one] projecting lugs [lug] integrally connected to a central portion of an inside surface thereof [thereto];

providing a [the] reinforcing insert defining a plurality of recesses [recess] adapted to mate in inter-fitting engagement with said plurality of lugs [lug]; and

connecting the insert to the beam by inter-fitting the lugs [lug] within the recesses [recess], the insert being sized and positioned relative to the beam in accordance with engineering calculations which determine the expected distribution of forces along the beam.

VERSION OF AMENDED SPECIFICATION WITH MARKINGS
TO SHOW CHANGES MADE

Last full paragraph on page 4 (page 4, lines 15-23):

It is a still further object of this invention to provide a method for reinforcing structural members used to create an architectural structure, including the steps of: providing an extruded hollow beam, preferably made of metal, which beam has at least one reinforcement slat connecting rail or lug integrally connected thereto; providing a reinforcing insert, also preferably made of [preferable with] metal, which has an elongated channel therein adapted to mate in inter-fitting engagement with the connecting rail or lug; slidably placing the reinforcing insert upon the rail or lug, the reinforcing insert being sized and positioned relative to the beam in accordance with engineering calculations which determine the expected distribution of forces along the beam; and assembling a plurality of such beams into an architectural structure.

Paragraph commencing on page 8, line 20 and ending on page 9, line 4:

The invention is also directed to a method for reinforcing structural members used to create an architectural structure, including the steps of: providing an extruded hollow beam, preferably made of metal, which beam has at least one reinforcement slat connecting rail or lug integrally connected thereto; providing a reinforcing insert, also preferably made of [preferable with] metal, which has an elongated channel therein adapted to mate in inter-fitting engagement with the connecting rail or lug; slidably placing the reinforcing insert upon the rail or lug, the reinforcing insert being sized and positioned relative to the beam in accordance with engineering calculations which determine the expected distribution of forces along the beam; and assembling a plurality of such beams into an architectural structure.